Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

the analysis of the master's character and of the influences earliest at work on him already foreshadow the final expression of that character in its ultimate vision. One point, however, is worth special mention—the relations between James and Bergson. Although he makes light of the question of priority which had been raised by certain over-enthusiastic followers of Bergson, Flournoy thinks it wise to point to the fact that the essential doctrine which both James and Bergson have in common was formulated by James in *Mind*, in the article "on some omissions of introspective psychology," in the year 1884, some five years prior to Bergson's first book in that field. Beyond the conception of being as a flux, and concepts as utilitarian extracts therefrom, James has not much in common with Bergson. ". . . On ne voit pas très bien comment il aurait pu, sans se renier lui-même, accepter pour son compte la conception foncièrement moniste impliquée dans l' "élan vital original" d'où M. Bergson fait sortir tout l'univers par évolution divergente. Rien n'est plus opposé qu'une telle vision des choses à celle que James a toujours eue de l'univers: un chaos primordial sans trace d'unité, ni d'ordre, ni d'harmonie, ni de lois; pur assemblage de principes ou d'êtres séparés et indépendants, que leurs relations fortuites finissent par organiser en un monde d'harmonie et d'union croissantes, quoique peut-être jamais complètes" (pp. 183-4). The difference could not have been better formulated. Its statement is another evincement of the intimate adequacy of Flournoy's presentation of the philosophy of William James.

Comparisons of this sort are, however, only incidental. Flournoy's chief concern is with the *life* of James's philosophic vision. That life, he finds, has not been crystallized into complicated deductions and precise formulas which might be the bible of a school. It consists rather of an attitude which spreads by sympathetic contagion, and generates and sustains the freedom of thought and the spontaneity of action. It is to be hoped, for the benefit of the public who want a right account of William James's philosophy of life, that the book will be speedily translated and will have the widest circulation possible.

HORACE M. KALLEN.

THE UNIVERSITY OF WISCONSIN.

The Process of Abstraction: An Experimental Study. By THOMAS VERNER MOORE. The University of California Publications in Psychology, Vol. I, No. 2. Berkeley, The University Press, 1910.—pp. 73-197.

This monograph describes an experimental investigation, performed partly in Leipzig and partly at the University of California, of the mental processes involved in the formation of abstract ideas. It falls into four general divisions, dealing respectively with the literature of the problem (the author summarizes the results only of experimenters in this field, particularly the work of the Würzburg School and some investigations along the same line in the Leipzig Laboratory), the method of his own experiments, the results which he obtained, and his general conclusions regarding the product of the process of abstraction.

The experiments were performed as follows. A variety of geometrical figures were drawn upon a disc in such a manner that by rotation groups of five figures could be exposed successively to the reagent, each exposure lasting one-fourth of a second. In the successive exposures one figure was common to all the groups and all the others were different. The reagent was instructed to look for the repetition of a figure and to stop the experiment as soon as he was certain that some figure had appeared twice. This repeated figure, then, was the common quality to be abstracted from the total presented complex.

The statement of results falls under four headings: The breaking up of the group as the common figure is discovered, the process of perception, the process of memory, and the process of recognition. It was found that the elements of a group have a different mental value before and after the discovery of the common figure. If no common element is discovered, several figures can usually be recalled with ease, but once the common element has been perceived, the other figures disappear from consciousness. The process of perception was found to pass through several stages, varying from the mere general idea that some figure has been repeated, through a more or less definite idea of what the figure was, to an accurate idea of the figure and its orientation. Frequently there is no imagery at all in the memory of the figure and the author concludes that "the mental image forms no essential part in the apprehension of a figure" (p. 134). In many cases the residuum of the abstracting process is merely the memory that the figure belongs to such or such categories, *e. g.*, has certain angles or is like some familiar objects, and this type of memorizing is found to be much more efficient than memory by either visual or motor imagery. The process of recognition, also, is shown to be entirely independent of imagery. The recognition may be a mere intimation of repetition or a probability or a certainty, and certain recognition does not depend upon perfect perception. The basis of recognition is found to be not merely images and feelings, but the mental categories that couple the perception to the train of memory. "That which is the chief factor in perception, that by which we recall figures, is also that by which we recognize them. And this is the figure's series of associated concepts" (p. 178).

The general conclusion regarding abstraction is that "there exist imageless mental contents representative of a visible object," whatever the nature of these imageless contents may be, and second, that "perception is a process of assimilating the data of sense experience to their appropriate mental categories" (p. 180 f.). These categories are qualitatively distinct from sensations or images and cannot be identified with feelings or will. "We must therefore recognize the existence of another division of mental processes to which our thoughts and mental categories must be relegated" (p. 187). This element is the bearer of meaning and may be called the concept or thought.

GEORGE H. SABINE.

LELAND STANFORD JR. UNIVERSITY.

The Learning Process. By STEPHEN SHELDON COLVIN. New York, The Macmillan Co., 1911.—pp. xxv, 336.

"The point of view that is held to throughout the following discussion in